



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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New updates in this issue:

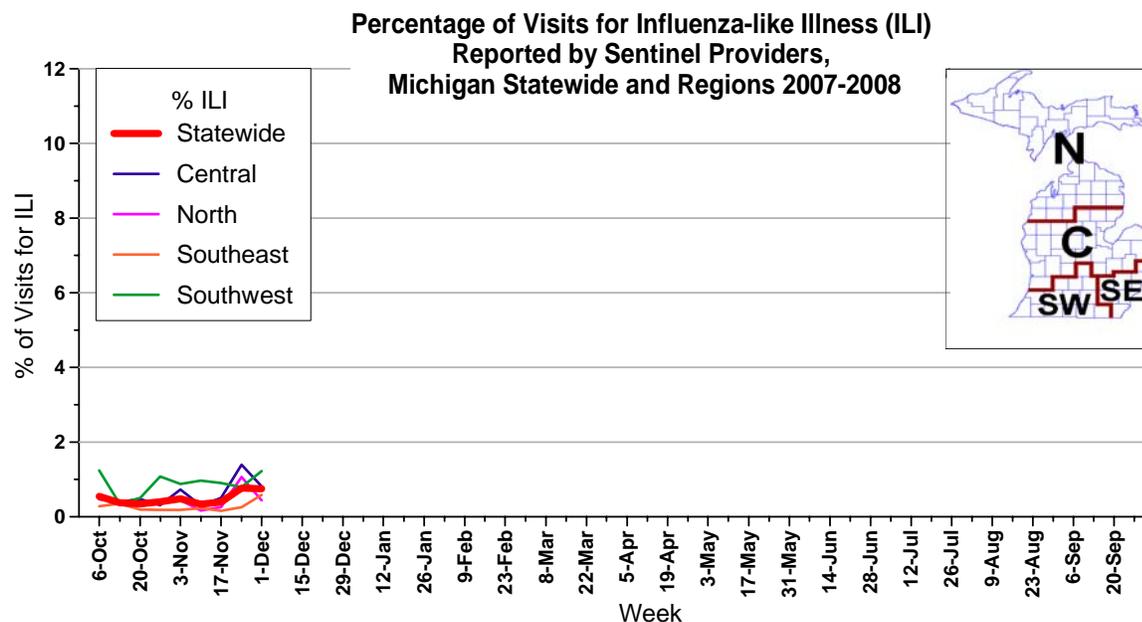
- **Michigan Surveillance:** MDCH announces its first culture-confirmed influenza case of this season.
- **National Surveillance:** Influenza activity continues at low levels; four states report local activity.
- **Avian Influenza:** China reports 17th fatality due to H5N1; Poland has first H5N1 outbreaks in poultry.

Michigan Disease Surveillance System: The week ending December 1 saw both individual influenza reports and aggregate flu-like illness reports hold steady near last week's levels. Both aggregate and individual reports are consistent with levels seen at this time last year.

Emergency Department Surveillance: Emergency department visits due to respiratory complaints increased very slightly this past week, while constitutional complaints decreased slightly. Both constitutional and respiratory complaints are consistent with numbers seen this time last year. Two constitutional alerts in the N(1) and SW(1) Influenza Surveillance Regions and two respiratory alerts in the C(1) and N(1) Influenza Surveillance Regions were generated last week.

Over-the-Counter Product Surveillance: OTC product sales activity was steady overall last week, with only minor changes that should be considered typical weekly fluctuations. The indicators levels are comparable to those seen at this time last year, except for chest rubs, which are slightly higher.

Sentinel Surveillance (as of December 6): During the week ending December 1, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained at a low level and was unchanged from last week at 0.8% of all visits. This represents 47 cases of ILI out of 6253 total patient visits; twenty-nine sentinels provided data for this report. By region, the proportion of visits due to ILI was: 0.8%, Central; 0.4%, North; 0.6%, Southeast; and 1.2% Southwest. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage and recommend year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of December 6): The MDCH Bureau of Laboratories has culture confirmed its first case of influenza for the 2007-2008 influenza season. This case of influenza B was from a 9 year old child in Marquette County; the child was not hospitalized. This virus was strain typed as B/Shanghai, which is not a component of the 2007-2008 influenza vaccine.

Sentinel laboratories across the state are reporting either zero or extremely low positive numbers of influenza tests. Low levels of parainfluenza viruses have been reported from the Southeast region.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

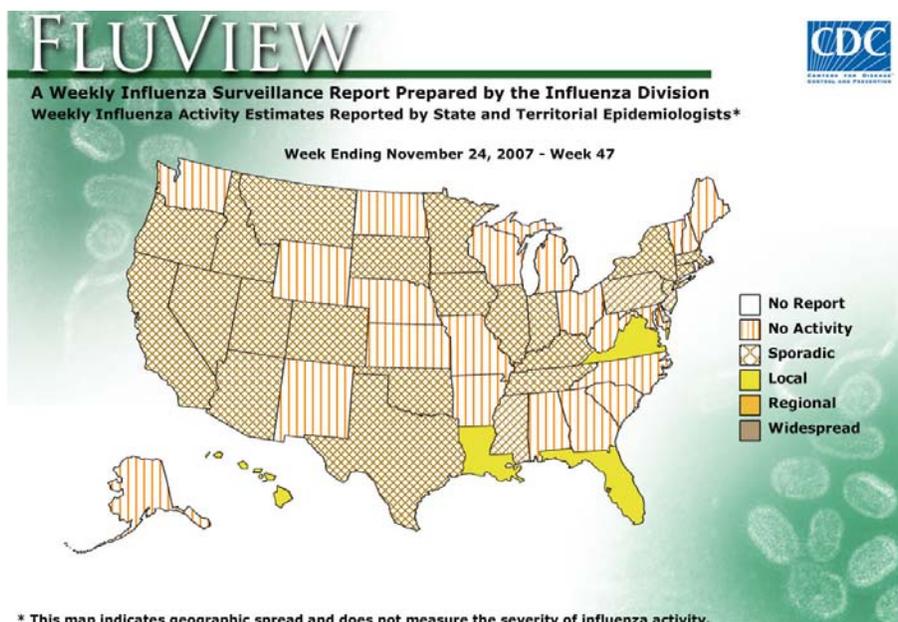
Influenza-Associated Pediatric Mortality (as of December 6): For the 2007-2008 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

***Reminder: The CDC has asked all states to continue to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child less than 18 years of age resulting from a clinically compatible illness confirmed to be influenza by an appropriate laboratory or rapid diagnostic test, but also unexplained death with evidence of an infectious process in a child. Refer to http://www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. It is important to immediately call MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of December 6): There have been no reports for the 2007-2008 influenza season.

National (CDC [edited], November 30): During week 47 (November 18-24, 2007), a low level of influenza activity was reported in the United States. During week 47, WHO and NREVSS laboratories reported 1,767 specimens tested for influenza viruses, 36 (2.0%) of which were positive, including three influenza A (H1) viruses (Mountain region), 28 influenza A viruses that were not subtyped (East North Central, Mid-Atlantic, Mountain, Pacific, South Atlantic, and West South Central regions), and five influenza B viruses (South Atlantic region). The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. The proportion of outpatient visits for influenza-like illness (ILI) and acute respiratory illness (ARI) was below national and region-specific baseline levels. Four states reported local influenza activity; 24 states and the District of Columbia reported sporadic influenza activity; and 22 states reported no influenza activity.

To access the entire CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>



International (Associated Press, December 4): Influenza has begun raging throughout Japan, particularly in the country's northernmost main island of Hokkaido, the National Institute of Infectious Diseases said Tuesday.

The number of flu patients at some 4,700 hospitals and clinics nationwide under regular observation came to 7,162, or 1.53 per institution, in the week that ended Nov. 25, a sharp increase from the 4,415, or 0.94 per facility, recorded in the preceding week, the state-run institute said in a preliminary report.

If the number of per-facility patients exceeded the 1 mark in one week, the institute regards it as the start of a nationwide flu season.

Institute officials said the onset of the flu season has been the fastest this year since 1987 when comparable data was available. By prefecture, the number of per-facility patients is the biggest in Hokkaido at 12.64, followed by Okayama at 3.82, Okinawa at 3.28, and Hyogo and Wakayama each at 3.04, the report said.

The flu, an infectious disease caused by influenza viruses, strikes about 10 million people annually in Japan, said the institute, an organization under the Ministry of Health, Labor and Welfare.

Common symptoms are fevers of 38C or higher, headache, fatigue, muscle pains, joint aches, and general discomfort. Influenza also causes pneumonia, which can be fatal, particularly for young children, elderly and people with chronic diseases, the officials said.

There are three human types of influenza -- type A Soviet Union flu, type A Hong Kong flu, and the type B flu. Human influenza vaccines produced in Japan are effective against all the three types of influenza, they said. The type A Soviet Union flu accounted for 95 percent of viruses detected from flu patients in 14 prefectures across Japan between early September and mid-November, the officials said.

The number of nursery schools, kindergartens, primary and junior high schools that closed classes between October 28 and Nov. 24 due to the flu came to 439. In the week through Nov. 25, the number of schools that closed classes stood at 227, indicating an increase of flu patients.

International, WHO (Weekly Epidemiological Record, November 28): During weeks 46–47, the level of overall influenza activity in the world remained low. Only sporadic activity was observed in some countries of the northern hemisphere: Belgium, the Islamic Republic of Iran, Norway and Switzerland detected influenza A for the first time in the 2007–2008 winter season.

Japan. Regional outbreak was reported with influenza A (H1N1) detected.

United States of America. A slight increase in the level of influenza activity was observed in weeks 46 and 47, with 3 states reporting localized activity. Of all samples tested, 2.8 % were positive for influenza, predominantly influenza A.

During weeks 46-47, sporadic influenza activity was detected in Belgium (B), Bulgaria (H1), Canada (A, B), China (B predominant, H3), Hong Kong Special Administrative Region of China (A, B), Denmark (B), France (A), Islamic Republic of Iran (H1, B), Japan (H1), Republic of Korea (H1), Madagascar (H1), Mexico (A), Norway (A, B), Poland (A, B), Russian Federation (B predominant, H1, H3), Sri Lanka (A), Switzerland (A, B) and United Kingdom (H1). Croatia, Italy, Latvia, Luxembourg, Mongolia, Panama, Portugal, Romania, Slovenia, Spain, Tunisia, Ukraine reported no influenza activity.

MDCH reported **SPORADIC ACTIVITY** to the CDC for the week ending December 1, 2007.

For stakeholders interested in additional information regarding influenza vaccination and education, the MDCH publication *Michigan FluBytes* is available online at http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html. *FluBytes* is published weekly during the influenza season.

End of Seasonal Report

Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International, Human (WHO, December 4): The Ministry of Health in China has reported a new case of human infection with the H5N1 avian influenza virus. The case was confirmed by the national laboratory on 2 December.

The 24-year old male from Jiangsu Province, developed symptoms on 24 November, was hospitalized on 27 November and died on 2 December. There is no initial indication to suggest he had contact with sick birds prior to becoming unwell. Close contacts have been placed under medical observation and all remain well.

Of the 26 cases confirmed to date in China, 17 have been fatal.

International, Poultry (DEFRA website, November 29): The first epidemiology report into this H5N1 avian influenza outbreak has been published. No evidence has so far been found to indicate introduction via infected poultry or poultry products or vehicles/people transporting them, from countries which have undisclosed infection in their domestic turkey, geese and duck population. Wild birds cannot be ruled out as a source of infection; there is no evidence of H5N1 infection in the local wild bird population or in GB as a whole, but continued surveillance may help clarify the infection status of the wild bird population. Further surveillance, testing and epidemiological work on this outbreak is ongoing.

International, Poultry (Xinhua News Agency, November 29): Poultry in Romanian eastern county Tulcea was contaminated with the bird flu virus from migratory birds, the National Sanitary Veterinary and Animal Safety Authority announced on Thursday.

Fodder for the poultry bred in the contaminated household came from a region intensely sought by wild birds, according to the preliminary epidemiological investigation.

At a meeting held on Thursday, the Tulcea County Anti-epizootic Command decided to have the local Hunters and Fishermen Association organize test hunts of wild birds and collect the bodies for specific lab tests. According to data presented in the report of the Danube Delta Biosphere Natural Reserve, 6,800 wild birds were tracked here on Wednesday.

The Romanian Institute for Animal Diagnosis and Health confirmed on Wednesday the bird flu outbreak, the H5N1 virus strain, after a laboratory testing of samples taken from dead chickens in a household at Murighiol of Tulcea County.

International, Poultry (Reuters Alertnet [edited], December 1): Two poultry farms northwest of Warsaw were cordoned off after the deadly H5N1 strain of bird flu was found in turkeys, Polish officials said on Saturday [1 Dec 2007].

Earlier reports had said 3 farms were affected, but the governor of Mazowsze province, where the outbreak occurred, later revised the count. "A 3rd farm had initially been suspected, but that suspicion was not confirmed," Governor Jacek Kozlowski told a news conference in Plock.

There are plans to cull 4000 birds at farms around the village of Brudzen near the city of Plock, Poland's chief veterinary officer Ewa Lech said on television.

She said the virus was most likely brought to Poland by migrating ducks, geese or swans, adding that an area within a 3-km (1.8 miles) radius of the outbreak had been cordoned off. "Areas of contamination and danger have been marked off and are being constantly monitored by veterinary officials and police," said Plock crisis-management official Hilary Januszczuk.

Poland's efforts to contain the spread of the virus won the approval of the European Commission.

"The Polish authorities notified us in the middle of the night about a strong suspicion of bird flu," European Commission spokeswoman Barbara Helfferich told Reuters. "We have been in contact with them since then; they are now taking the appropriate measures."

This includes disinfection mats over which pedestrians and vehicles entering and leaving the affected areas must pass, Polish officials said.

Bird flu was discovered in wild swans near the north Poland city of Torun in early 2006.

"There is no cause for alarm," Polish Prime Minister Donald Tusk said on television. "I am in touch with the interior and health ministers as well as veterinary officials in charge. This is not the kind of threat we had several years ago."

International, Poultry (Reuters [edited], December 1): Bird flu has spread to another district in northwestern Bangladesh, forcing health and veterinary workers to cull some 6000 chickens and destroy over 2500 eggs, officials said on Sat 1 Dec 2007.

The latest case was reported in a village in Pabna district, 160 km from the capital Dhaka, a senior official of the fisheries and livestock ministry said.

Bird flu was 1st detected near the capital in March 2007 and has since spread mostly to northern districts. There have been no cases of human infection.

Including Pabna, 20 of Bangladesh's 64 districts have been affected by the virus, which has forced authorities to kill 256 000 chickens and destroy nearly 3 million eggs since its outbreak.

About 4 million Bangladeshis are directly or indirectly associated with poultry farming.

International, Poultry (PAP News Agency, December 4): Two dead hens tested positive for the H5 strain of bird flu in the locality of Mysliborzyce, near Plock, central Poland, Hilary Januszczyk from the county team of crisis management in Plock said Tuesday [4 December].

On Tuesday, 755 birds will be slaughtered in Mysliborzyce farms in a bid to prevent the spread of the disease.

On Saturday the deadly H5N1 virus was found on two turkey farms in the Plock area.

Michigan Wild Bird Surveillance (USDA, as of December 6): For the 2007 testing season, 1412 Michigan samples have been taken so far, comprised of 100 live bird samples, 878 hunter-killed birds, 159 morbidity/mortality samples, and 275 environmental samples. Three recent samples from Michigan have been entered into the HEDDS system: a mallard from Bay County on 10/30/07, an American black duck from Saint Clair County on 10/31/07, and an American black duck from Tuscola County on 11/4/07. All samples have preliminarily tested positive for the North American H5N1 strain (unrelated to current outbreaks in the Eastern Hemisphere), and confirmatory testing is underway.

H5N1 subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 60,136 birds or environmental samples tested nationwide. The 2007 testing season will run from April 1, 2007-March 31, 2008. For more information, visit the National H5N1 Early Detection Data System website at <http://wildlifedisease.nbio.gov/ai/>.

To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

Please contact Susan Vagasky at VagaskyS@Michigan.gov with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Contributors

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Table 1. H5N1 Influenza in Poultry (Outbreaks up to December 3, 2007)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 12/05/2007)

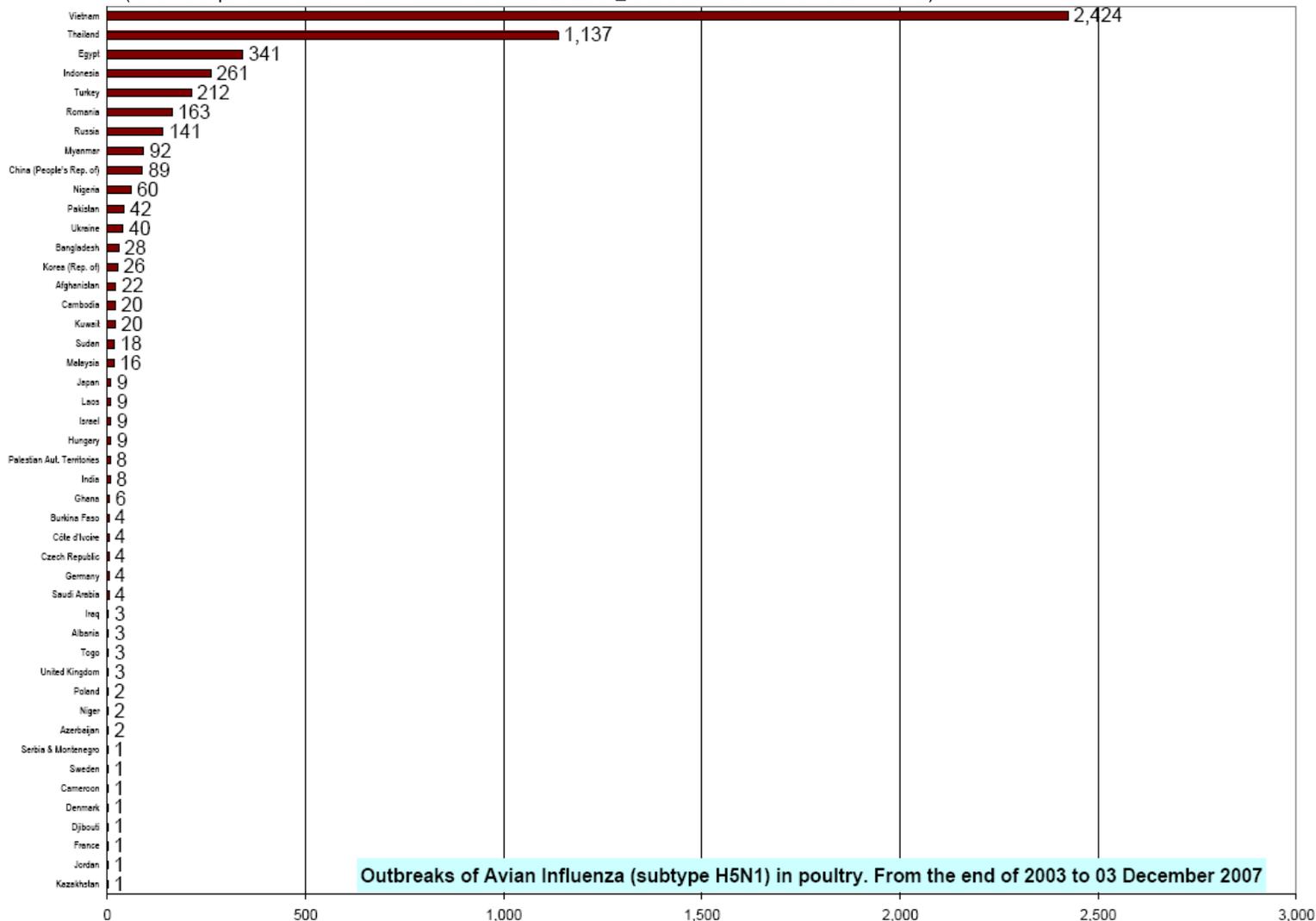


Table 2. H5N1 Influenza in Humans (Cases up to December 4, 2007)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2007_12_04/en/index.html Downloaded 12/06/2007)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		Total	
	cases	deaths										
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	7	7
China	1	1	0	0	8	5	13	8	4	3	26	17
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	20	5	38	15
Indonesia	0	0	0	0	20	13	55	45	38	33	113	91
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	2	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	7	4	100	46
Total	4	4	46	32	98	43	115	79	72	48	336	207